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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,803	05/09/2006	Morten Meldal	HOIB4.001APC	8219

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EXAMINER

GROSS, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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1639

NOTIFICATION DATE	DELIVERY MODE
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07/01/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/561,803	Applicant(s) MELDAL ET AL.	
	Examiner CHRISTOPHER M. GROSS	Art Unit 1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) See Continuation Sheet are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1,2,4,5,13,26,28,37-39,41,57,59,62,67,69,72,75-77,79,82-85,92,95,97,107-109,114,116-121,125,134 and 139.

Continuation of Disposition of Claims: Claims subject to restriction and/or election requirement are 1,2,4,5,13,26,28,37-39,41,57,59,62,67,69,72,75-77,79,82-85,92,95,97,107-109,114,116-121,125,134 and 139.

DETAILED ACTION

Responsive to communications entered 5/18/2006. Claims 1,2,4,5,13,26,28,37-39,41,57,59,62,67,69,72,75-77,79,82-85,92,95,97,107-109,114,116-121,125,134,139 are pending.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1,2,4,5,13,15,26,28,37,38,39,41,57 drawn to a precursor molecule of formula shown in claim 1.

Group II, claim(s) 59,62,67,69,72,75-77,79,83 drawn to a method of preparing a precursor molecule.

Group III, claim(s) 82,83, 84,85,92,95,97,107 drawn to a method of preparing a heterocyclic compound of at least 2 fused rings.

Group IV, claim(s) 108,109 drawn to a method of a method of preparing at least 2 different cyclic organic compounds each comprising at least two fused rings.

Group V, claim(s) 114,116-121 drawn to a library of heterocyclic compounds.

Group VI, claim(s) 125,139 drawn to a method of identifying a heterocyclic compound.

Group VII, claim(s) 134, drawn to a method of treatment of a clinical condition.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The technical feature of groups I-VII appears to be related precursor molecules such as peptide analogs bearing an N terminus derivatized with a masked aldehyde and C terminus comprising a linker and nucleophile comprising a pi system, referred to as MA-AG-NH-L₂-Nu- per claim 1.

However, materials such as this were known in the art at the time the invention was filed (Groth et al 2001 J. Comb. Chem. 3:45-63 – IDS entry 5/18/2006, see especially scheme 9 on p 55); therefore the technical feature linking all the inventions of groups I-VII does not constitute a *special* technical feature as defined by PCT Rule 13.2, because it does not define a contribution over the prior art.

Each method set forth above as groups II, III, VI, and VII requires materially different steps. For example, the method of treatment of a clinical condition, that is group VII requires introduction of materials into a patient whereas the method of preparing precursor molecules, that is group II does not. The precursor molecule of group I may be used to prepared more than the library that is group V. See for instance compound 43 prepared by Groth et al. In conclusion, the groups above do not constitute a single inventive concept because unity of invention is lacking.

Species Election

This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

Each **genus** identified below is indicated in **bold**. Applicant is requested to elect one species from within *each* genus of the elected invention.

(From claims 1,2,4,5,13,15,26,28,37,38,39,41,57 and 59,62,67,69,72,75-77,79,83) Applicant is required to elect single specific species of **precursor molecule** specified as to atom and bond without the use of variable groups (e.g. MA, Nu, etc.) Applicant is strongly encouraged to elect using a chemical drawing. Currently, claims 1,2,4,5,13,15,26,28,37,38,39,41,57 are generic for invention I; claims 59,62,67,69,72,75-77,79,83 are generic for invention II; 82,83,84,92,95,97,107 are generic for invention III.

(From claims 82,83, 84,92,95,97,107) Applicant is required to elect single specific species of **heterocycle** specified as to atom and bond without the use of variable groups (e.g. MA, L₁, Nu, etc.) Applicant is strongly encouraged to elect using a chemical drawing. Currently, claims 82,83,84,92,95,97,107 are generic for invention III.

(From claims 114,116-121) Applicant is required to elect single specific species of **heterocycle library member** specified as to atom and bond without the use of variable groups (e.g. R₂, R₁, etc.) Applicant is strongly encouraged to elect using a chemical drawing. Currently, Claims 108, 109 are generic for invention IV; claims 114,116-121 are generic for invention V. Claims 125, 139 are generic for invention VI. Claim 134 is generic for invention VII.

According to the guidelines in Section (f)(i)(a) of Annex B of the PCT Administrative Instructions, the special technical feature as defined by PCT Rule 13.2 shall be considered to be met when all the alternatives of a Markush-group are of similar nature. For chemical alternatives, such as the claimed sequences, the Markush group shall be regarded as being of similar nature when

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(A) all alternatives have a common property or activity **and**

(B)(1) a common structure is preset, i.e., a significant structure is shared by all of the alternatives or

(B)(2) in cases where the common structure cannot be the unifying criteria, all alternatives belong to an art recognized class of compounds in the art to which the invention pertains.

The species listed above are considered to be each separate inventions for the following reasons:

The genus/genera set forth above include species which do not share a common core structure. For example, each the precursors and each of the heterocycles and libraries thereof do not share a common ring configuration and are not expected to have similar activity or properties: compare for instance the library set forth in claim 121 to that of claim 116 or some precursor molecules include amino acids, whereas others do not.

(From claim 85) Applicant is required to elect single specific species of **deprotection conditions** as set forth in claim 85 (e.g. MA, L₁, alkyl etc.) Currently, claims 82 and 85 are generic for invention III.

Each deprotection condition does not share a common technical feature in that each requires materially different steps to perform.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims

subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Gross whose telephone number is (571)272-4446. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. Douglas Schultz can be reached on 571 272-0763. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher M Gross
Examiner
Art Unit 1639

cg

/Mark L. Shibuya, Ph.D./
Primary Examiner, Art Unit 1639